

**ROTEL** *hi-fi*

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STEREO POWER AMPLIFIER

**RB-960BX**

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**owner's  
manual**

WARNING  
TO PREVENT FIRE OR SHOCK HAZARD,  
DO NOT EXPOSE THIS APPLIANCE TO  
RAIN OR MOISTURE.

Write your SERIAL NUMBER here.  
The number is located near the name  
plate on the rear panel.

# SAFETY INSTRUCTION

**1. Read Instructions**— All the safety and operating instructions should be read before the appliance is operated.

**2. Retain Instructions**— The safety and operating instructions should be retained for future reference.

**3. Heed Warnings**— All warnings on the appliance and in the operating instructions should be adhered to.

**4. Follow Instructions**— All operating and use instructions should be followed.

**5. Water and Moisture**— The appliance should not be used near water -- for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

**6. Carts and Stands**—the appliance should be used only with a cart or stand that is recommended by the manufacturer.

**6A.** An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

**7. Wall or Ceiling Mounting**— The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

**8. Ventilation**— The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

**9. Heat**— The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

**10. Power Sources**— The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**11. Grounding or Polarization**— The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

**12. Power-Cord Protection**— Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**13. Cleaning**— The appliance should be cleaned only as recommended by the manufacturer.

**14. Nonuse Periods**— The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

**15. Object and Liquid Entry**— Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

**16. Damage Requiring Service**— The appliance should be serviced by qualified factory authorized service personnel when:

A. The power-supply cord or the plug has been damaged; or

B. Objects have fallen, or liquid has been spilled into the appliance; or

C. The appliance has been exposed to rain; or

D. The appliance does not appear to operate normally or exhibits a marked change in performance; or

E. The appliance has been dropped, or the enclosure damaged.

**17. Servicing**— The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified factory authorized service personnel.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture

## PORTABLE CART WARNING



53125A



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

### • Explanation of Graphical Symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



### EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 2-core mains lead without a plug, neither core is to be connected to the earth terminal of a three pin plug, make certain that they are connected, according to the following instruction, to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

**IMPORTANT:** The wires in this mains lead are coloured in accordance with the following code:

**BLUE: NEUTRAL**

**BROWN: LIVE**

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured **BLUE** must be connected to the terminal which is marked with the letter **N** or coloured **BLUE** or **BLACK**. The wire which is coloured **BROWN** must be connected to the terminal which is marked with the letter **L** or coloured **BROWN** or **RED**.

# ENGLISH

## STEREO POWER AMPLIFIER RB-960BX

### A WORD FROM ROTEL

Rotel take this opportunity to thank you for choosing our equipment for your home entertainment.

Rotel equipment represents a very high state of the art in sound reproduction, as the result of our everlasting determination to achieve the truly hi-fi performance. Please enjoy the sound Rotel have created for many years to come.

To make sure you get the most out of your equipment, please read this owner's manual carefully before you attempt any connections.

### BEFORE CONNECTIONS

#### 1. Place for Installation

Ensure to place the unit in a flat surface where it is free from humidity, vibration, high temperature and not exposed to direct sunlight. Also, be careful not to place the unit in a highly enclosed area without adequate ventilation around the unit. Do not block the ventilation openings at the top and the bottom of the unit to prevent excessive heat built up.

#### 2. Electrical Requirements

Your equipment has been designed to be powered by the local AC Voltage. Check the setting of your unit by looking at the rear panel name plate. Never try to plug the unit into an outlet of higher voltage, as this causes a serious fire hazard. Consult your dealer if in doubt.

#### 3. Connecting the Power Cord

Always handle the Power cord with care. Ensure to connect the cord to the household wall outlet. When plugging and unplugging make sure the power switch on the unit is turned off.

#### 4. Do not Open the Cabinet

There are no user-serviceable parts inside the cabinet of the unit. Do not attempt to open the cabinet or tamper with the internal components. If water or foreign object falls inside the unit by accident, disconnect the power cord immediately and consult a qualified electrician or your dealer.

#### 5. Cleaning Your Unit

If your unit becomes dirty, wipe it gently with a soft, dry cloth. Never use solvents of any kind.

#### 6. Stereo and Mono Operations

The power amplifier can be used as either normal stereo or bridged mono amplifier. The unit comes factory-set as the stereo amplifier with the slide BRIDGED switch on the back of the unit set at the STEREO position. Do not tamper with the switch, unless you wish to use the unit as the mono amplifier in which case reset the switch to the MONO position. Do not connect speakers before the switch position is confirmed set correctly according to your choice. NOTE: Two RB960BX bridged mono amplifiers must be used for a stereo operation with full compatibility.

**7. AC Outlet Receptacles (applicable to U.S.A., Canada, and where approved for the usage)**

There are two sets of the AC outlets on the back panel of the unit, through which power can be supplied to equipments connected to the unit such as your turntable and CD player. Each AC outlet is the switched type, so turning the power on and off is controlled by the power switch of the unit. The total power consumption of the equipments must not exceed the rating of 200 watts maximum. Never connect a power amplifier to the AC outlet.

### CONNECTIONS

#### 1. Connecting Components

The illustration shows what audio components you can connect to the rear panel of the unit and how they should be properly hooked up via RCA type pin cords. Ensure that the Left and the Right channels are correctly matched between the RCA type sockets of the unit and those on the components.

#### 2. Connecting Speakers

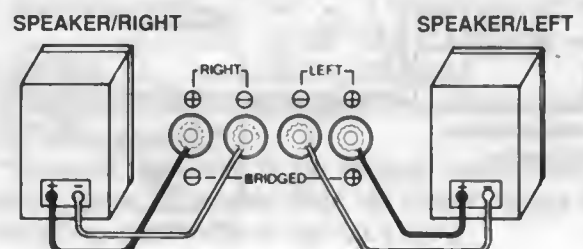
a) Use speakers with impedance ratings of 4 to 8 ohms. However, if you wish to operate the unit in the bridged mode as the mono power amplifier with only one speaker, ensure the speaker is rated 8 ohms minimum. Never connect a speaker with lower impedance than 8 ohms in this case. The speaker impedance is indicated on the back or in the instruction manual of the speaker.

b) Do not use speakers that have very high capacitive load, say, over 0.1 microfarads, as it may cause a damage to the power amplifier. Normally, most speakers are low capacitance type, but there are a few which do have excessively high capacitance.

c) Use proper speaker cords normally your dealer will recommend, with as low capacitance content as possible. The speaker terminal posts provided on the back of the unit can also take banana plugs.

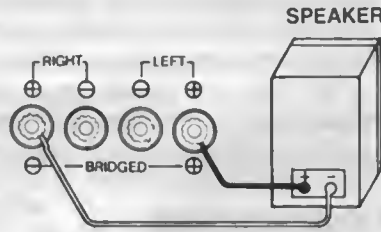
d) If connecting the speaker cords directly with the bare wire ends, suggest you strip about 1cm of the insulation shield cover from the ends of the speaker cords. Twist any exposed strands tightly, and insert the ends properly to the terminal posts.

e) When using the unit as the stereo power amplifier: make sure the BRIDGED switch is set correctly at the STEREO position. Connect the Left and the Right Channels correctly between the unit and the speakers, and ensure for each channel the "+" and the "-" are also correctly matched. Check that the speaker cord ends (exposed tips) on the terminal posts are not stray and touching one another,

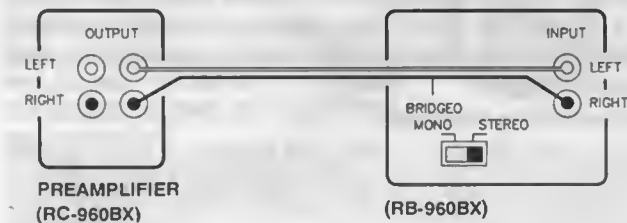


which will cause short circuits and may damage both the unit and the speakers.

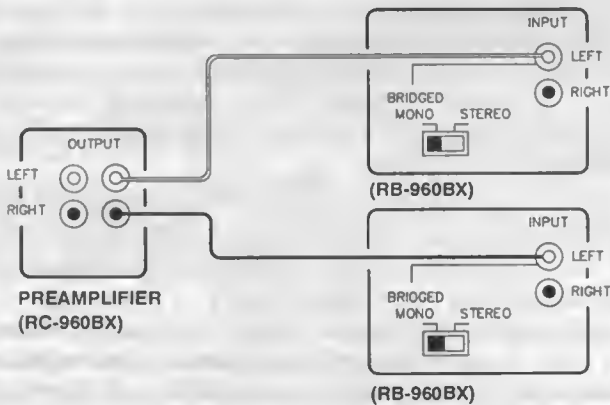
f) When using the unit as the mono power amplifier (bridged connection): make sure the BRIDGED switch is set correctly at the MONO position. Connect only one speaker as marked on the back panel of the unit. Connect the "+" speaker lead wire to the LEFT "+" terminal post and the "-" speaker lead wire to the RIGHT "-" terminal post. Do not use any speaker with a common grounding system; consult your dealer when in doubt.



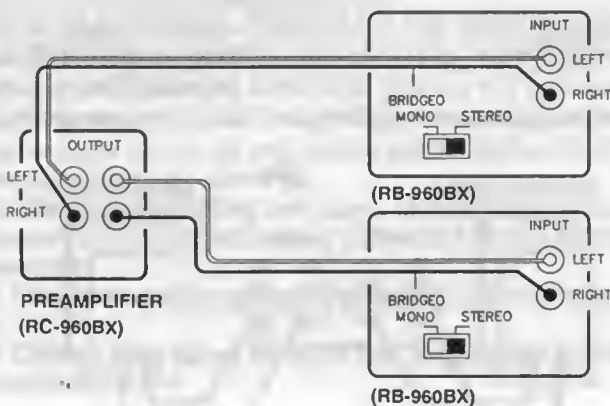
### 1) When using the unit as stereo power amplifier



### 2) When using the unit as monaural amplifier (bridge connection)



### 3) When using the unit as stereo amplifier for bi-amplification



## 2. Connecting Preamplifier

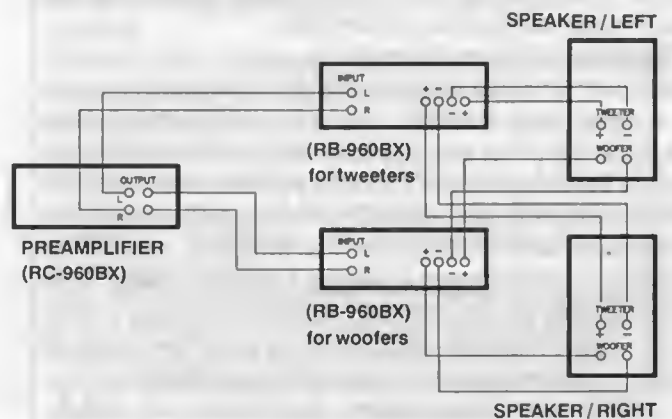
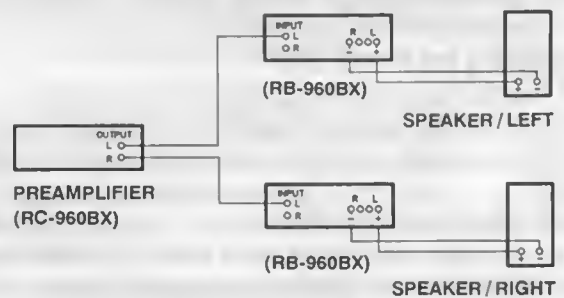
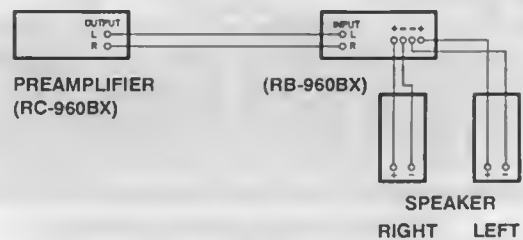
a) It is recommended to use the Rotel's RC-960BX preamplifier which is perfectly tuned to match with the power amplifier in sound quality and operation.

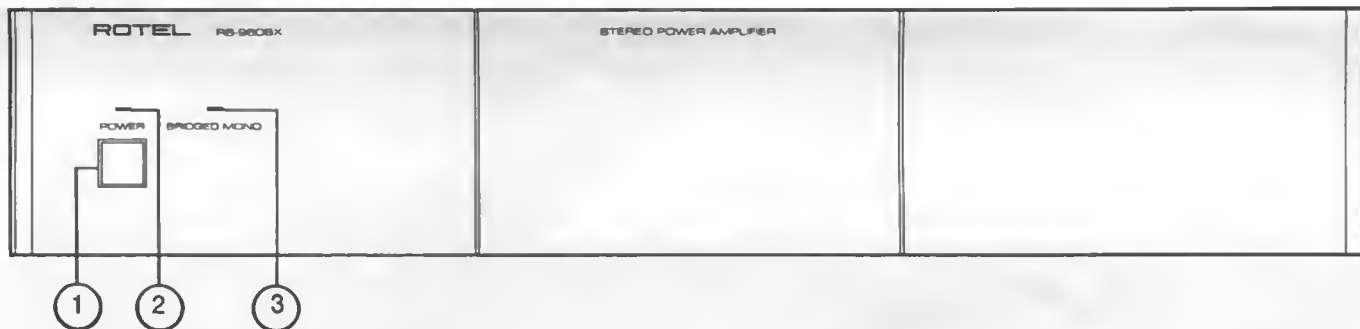
b) See the illustrations for 3 modes of the connections possible:

1) The common stereo mode using one preamplifier and one power amplifier.

2) The "BRIDGED" stereo mode using one preamplifier and two mono power amplifiers.

3) The "BI-AMPING" mode with one preamplifier, which has two sets of outputs connected in parallel, like the RC-960BX, and two stereo power amplifiers, one driving the tweeters and the other driving the woofers of the speakers, which have separate connectors for the tweeters and the woofers.





c) Ensure that regardless of the mode you choose to use the correct connections are done.

## SWITCH AND INDICATORS

### (1) Power Button

Press this button to turn on and off the unit.

### (2) Power Indicator

Glowes when power is turned on with the power button.

### (3) Bridged Mono Indicator

Lights up to show that the BRIDGED switch on the back of the unit is set to the MONO (bridged) position.

## WORDS ON OPERATIONS

### Precautions

1. Before commencing operation, check to see if all connections are properly made.
2. Always ensure to set the Volume control of the connected preamplifier to the minimum position before turning on the Power switch.

## HUM AND NOISE

In any high fidelity installations, hum may be caused by the Interconnection of turntable, tuner, amplifier and speakers as the result of wiring, different grounding or locations of components.

If hum is experienced with your unit, disconnect everything but the speakers from the unit. Plug in the turntable and if hum or howling appears, move it away from the speakers as much as possible.

Note hum may also be induced by defective cable connections or by running the cables too close to strong AC field. When your unit picks up noise during the reception of broadcasts, causes are mostly due to external objects such as fluorescent lamps and house appliances using motor or thermostat, or others than may induce noise.

Either relocating the unit away from the noise sources or using an Improved outdoor antenna may readily resolve the problem. In the event you cannot find the cause, consult your dealer or a qualified electrician.

## SPECIFICATIONS RB-960BX

Continuous Power Output...60 watts\* per channel, min.  
RMS both channels driven into  
8 ohms from 20 to 20,000 Hz  
with no more than 0.03% total  
harmonic distortion.

DIN Output.....110 watts per channel (1 kHz, 4  
ohms, 1% THD)

Peak Current.....30 A (0.1 ohms, 10 usec,  
1 pulse)

Power Output (BTL).....180 watts (mono) min. RMS  
driven into 8 ohms from 20 to  
20,000 Hz with no more than  
0.03% total harmonic distortion.

Total Harmonic Distortion...No more than 0.03% (contin-  
(20 to 20,000Hz) uous rated power output) No  
more than 0.03% (continuous  
1/2 rated power output) No  
more than 0.05% (1 watt per  
channel power output, 8 ohms)

Intermodulation Distortion...No more than 0.05% (contin-  
(60 Hz: 7 kHz = 4:1) uous rated power output) No  
more than 0.05% (continuous  
1/2 rated power output) No  
more than 0.05% (1 watt per  
channel power output, 8 ohms)

Output: Speaker.....8 ohms nominal

Damping Factor.....280 (20 to 20,000 Hz, 8 ohms)

Input Sensitivity/ Impedance.....1.0 V/ 27 kohms

Frequency Response.....15 to 100,000 Hz, +0 dB, -1.0  
dB

Signal to Noise Ratio.....116 dB  
(IHF, A network)

## MISCELLANEOUS

Power Requirement.....120 V/ 60 Hz, 220 V/ 50 Hz,  
240 V/ 50 Hz (depending on  
destinations)

Power Consumption.....300 watts

Dimensions (overall).....440 (W) x 92 (H) x 334 (D) mm  
17-3/8" x 3-5/8" x 13-3/16"

Weight (net).....9.2 kg / 20.2 lbs.

● Specifications and design subject to possible modifica-  
tion without notice.

● \*Measured pursuant to the Federal Trade Commis-  
sion's Trade Regulation Rule or, Power Claims for  
Amplifiers (applicable to the U.S.A. only).